1. Evaluate the limit below, if possible.

$$\lim_{x \to 4} \frac{\sqrt{6x - 8} - 4}{2x - 8}$$

A. ∞

B. 1.225

C. 0.375

D. 0.125

E. None of the above

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2. Based on the information below, which of the following statements is always true?

   As x approaches 6, $f(x)$ approaches 18.908.

A. $f(x)$ is close to or exactly 18.908 when x is close to 6

B. $f(x) = 6$ when x is close to 18.908

C. $f(x) = 18.908$ when x is close to 6

D. $f(x)$ is close to or exactly 6 when x is close to 18.908

E. None of the above are always true.

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3. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x) = -\infty$.
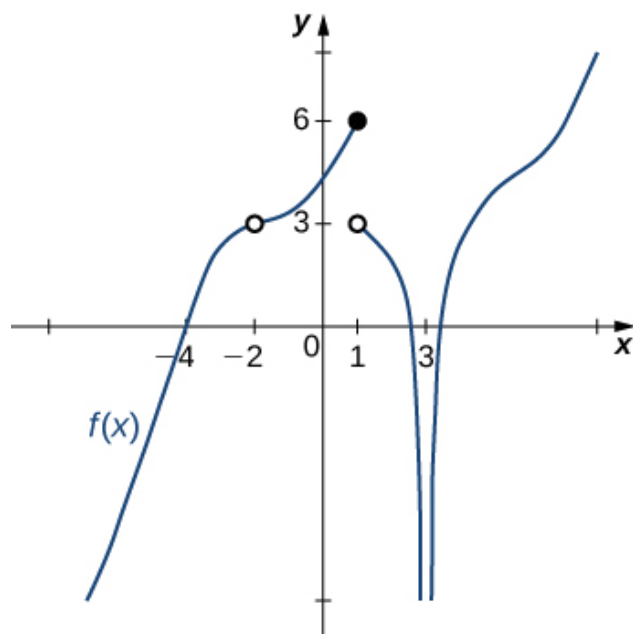
A. -2

B. $-\infty$

C. 3

D. Multiple a make the statement true.

E. No a make the statement true.

4. For the graph below, evaluate the limit: $\lim\limits_{x \to 1} f(x)$.
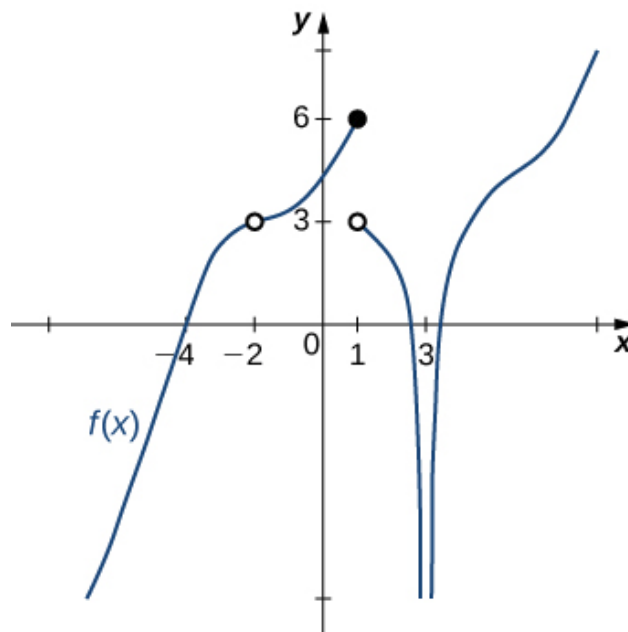
A. $-\infty$

B. 3

C. 6

D. The limit does not exist

E. None of the above

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5. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to -2^+} \frac{-3}{(x-2)^3} + 4$$

A. $f(-2)$

B. $-\infty$

C. ∞

D. The limit does not exist

E. None of the above

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6. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to 8^+} \frac{2}{(x+8)^6} + 9$$

A. $-\infty$

B. $f(8)$

C. ∞

D. The limit does not exist

E. None of the above

7. To estimate the one-sided limit of the function below as x approaches 5 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{5}{x} - 1}{x - 5}$$

A. $\{5.0000, 4.9000, 4.9900, 4.9990\}$

B. $\{4.9000, 4.9900, 5.0100, 5.1000\}$

C. $\{5.1000, 5.0100, 5.0010, 5.0001\}$

D. $\{4.9000, 4.9900, 4.9990, 4.9999\}$

E. $\{5.0000, 5.1000, 5.0100, 5.0010\}$

8. Based on the information below, which of the following statements is always true?

As x approaches 9, $f(x)$ approaches 2.293.

A. $f(x) = 9$ when x is close to 2.293

B. $f(x) = 2.293$ when x is close to 9

C. $f(x)$ is close to or exactly 2.293 when x is close to 9

D. $f(x)$ is close to or exactly 9 when x is close to 2.293

E. None of the above are always true.

9. To estimate the one-sided limit of the function below as x approaches 10 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{10}{x} - 1}{x - 10}$$

A. $\{10.0000, 9.9000, 9.9900, 9.9990\}$

B. $\{9.9000, 9.9900, 9.9990, 9.9999\}$

C. $\{9.9000, 9.9900, 10.0100, 10.1000\}$

D. $\{10.1000, 10.0100, 10.0010, 10.0001\}$

E. $\{10.0000, 10.1000, 10.0100, 10.0010\}$

10. Evaluate the limit below, if possible.

$$\lim_{x \to 7} \frac{\sqrt{6x - 6} - 6}{3x - 21}$$

A. 0.028

B. 0.816

C. ∞

D. 0.083

E. None of the above